

CLAIMS

1 1. A dual function reader device, comprising:
2 a housing, including a handle disposed at one end of said housing and including at one
3 trigger disposed along said handle;
4 a radio frequency (RF) antenna disposed along said housing;
5 an optical bar code scanner circuit disposed within said housing;
6 a RF transceiver disposed within said housing; and
7 a processing circuit coupled to said antenna, to said RF transceiver and to said scanner
8 circuit;
9 wherein a data read signal is generated by said reader after a successful optical read
10 operation is completed; and
11 wherein said processing circuit forms a RF transmission signal after receiving said data
12 read signal.

1 2. The device of claim 1, further including a tether attached to said device housing.

1 3. The device of claim 1, further comprising a battery pack disposed within said
2 housing, said battery pack being electrically coupled to said processing circuit and to said
3 transceiver.

1 4. The device of claim 1, further comprising a data entry device disposed on said
2 device housing, said data entry device being coupled to said processing circuit.

1 5. The device of claim 1, wherein said transceiver is enabled to transmit said
2 transmission signal after said data read signal is received by said RF transceiver.

1 6. The device of claim 1, further comprising an automatic backup circuit which
2 automatically enables said transceiver if no data read signal is generated a predetermined period
3 of time after said scanner circuit attempts to read an optical bar code.

1 7. The device of claim 1, wherein said processing circuit includes a manual
2 selection function which causes either said transceiver or said scanner circuit to be enabled.

1 8. The device of claim 6, wherein said automatic backup circuit is disabled if said
2 device is not coupled to an external power source.

1 9. The device of claim 1, wherein said data read signal is generated by said scanner
2 circuit after said scanner circuit receives uncorrupted data from an optical bar code.

1 10. A location indicating bar code label, comprising:
2 a bar code label which includes a bar code pattern printed on said label;
3 an indicator light disposed on said bar code label; and
4 a power source coupled to said indicator light;
5 wherein said power source is coupled to said indicator light.

1 11. The label of claim 10, further comprising a light sensor coupled to said indicator
2 light.

1 12. The label of claim 10, wherein said indicator light is illuminated when said bar
2 code label is scanned by a light source having a predetermined frequency.

1 13. A radio frequency (RF) responsive device for temporarily storing articles of
2 commerce, comprising:

3 a carrier unit;

4 a RF transponder device disposed on said carrier unit; wherein

5 an optical bar code disposed on said carrier unit;

6 said transponder device includes a data sequence regarding goods stored by said carrier
7 unit.

1 14. The device of claim 13, further comprising a low-powered radio disposed on
2 said carrier unit.

1 15. The device of claim 14, wherein said radio periodically wakes up and transmits a
2 status message.

1 16. The device of claim 13, wherein said transponder data sequence includes at least

one data set selected from the following group of data sets: the source of said carrier unit, the destination of said carrier unit, the source of the goods stored by the carrier unit, the destination of goods stored by said carrier unit, an inventory of goods stored by said carrier unit, the shelf-life of goods stored by said carrier unit, the current temperature of goods stored by said carrier unit, a preferred storage temperature for goods stored by said carrier unit, biological sensor data for goods stored by said carrier unit, and pressure sensor data for said carrier unit.

17. The device of claim 13, wherein said carrier unit comprises a railroad car.

18. The device of claim 13, wherein said carrier unit comprises a shipping container.

19. The device of claim 13, wherein said carrier unit comprises a shipping pallet.

20. The device of claim 13, wherein said carrier unit comprises a truck trailer.

21. A dual mode article identification system for goods stored by a carrier unit, comprising:

a dual mode reader device;

a temporary carrier unit for storing articles of commerce;

an optical bar code disposed on said temporary carrier unit;

a radio frequency (RF) transponder device disposed on said temporary carrier unit; and

a plurality of goods stored by said temporary carrier unit;

8 wherein said reader device reads said optical bar code and communicates with said RF
9 transponder device.

1 22. The system of claim 21, wherein said reader device includes an optical scanner
2 portion and a RF transceiver portion.

1 23. The system of claim 21, further comprising an indicator light disposed on said
2 carrier unit in close proximity to said optical bar code.

1 24. The system of claim 21, further comprising a biological sensor device for
2 sensing biological activity for said goods.

1 25. The system of claim 21, further comprising a pressure sensor for sensing
2 pressure exerted on said carrier unit.

1 26. The system of claim 21, further comprising a sensor for providing status data to
2 said RF transponder device.

1 27. A method of communicating between a reader device and a carrier unit, wherein
2 said carrier unit includes a plurality of goods stored therewith, includes an optical bar code
3 disposed thereon, and includes a radio frequency RF transponder device disposed thereon, and
4 wherein said reader device includes an optical bar code scanner and a RF transceiver, said

method comprising the steps of:

optically scanning said optical bar code using said reader device;
establishing RF communication between said reader device and said RF transponder
device; and
delivering status information from said carrier unit to said reader device.

28. The method of claim 27, wherein said status information comprises status
information for said plurality of goods.

29. The method of claim 27, further comprising the step of transmitting status
information from said reader unit to said carrier unit.

30. The method of claim 27, wherein said status information comprises status
information for said carrier unit.

31. The method of claim 27, further comprising the step of transmitting at least one
location detection signal for geographically locating said carrier unit.

32. The method of claim 27, further comprising the step of communicating with said
RF transponder via a base station.

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C1